SECTION 08 8000

GLAZING

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LANL MASTER SPECIFICATION

When editing to suit project, author shall add job-specific requirements and delete only those portions that in no way apply to the activity (e.g., a component that does not apply). To seek a variance from applicable requirements, contact the ESM Architectural POC.

When assembling a specification package, include applicable specifications from all Divisions, especially Division 1, General Requirements.

Delete information within “stars” during editing.

Specification developed for ML-3 projects. For ML-1 / ML-2, additional requirements and QA reviews are required.

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PART 1 GENERAL

1.1 SECTION INCLUDES

A. Glass and glazing for [storefront] [hollow metal work] [glazed walls] [windows] [and doors].

1.2 PERFORMANCE REQUIREMENTS

A. Provide glass and glazing materials for continuity of building enclosure, vapor retarder and air barrier:

1. In conjunction with materials described in Section [08 1213] [08 1100] [08 1400] [08 4113] [08 5113]

2. Maintaining a continuous vapor retarder and air barrier throughout the glazed assembly from glass pane to heel bead of glazing sealant.

B. Size glass to withstand dead loads and positive and negative live loads acting normal to plane of glass in accordance with ASCE 7.

C. Limit glass deflection to l/200 or flexure limit of glass with full recovery of glazing materials, whichever is less.

1.3 SUBMITTALS

A. Submit the following in accordance with the requirements of Section 01 3300.

1. Catalog data on glass types indicating structural, physical and environmental characteristics, size limitations, special handling or installation requirements.

2. Catalog data on glazing compounds indicating chemical, functional and environmental characteristics, limitations, special handling or installation requirements.

3. Manufacturer's certifications that [sealed insulated glass] [bullet resistant glass] [polycarbonate sheet] meets or exceeds specified requirements.

4. Glazing compound manufacturer's installation instructions.

5. LEED

a. Product Data for Credit EQ 4.1 (if credit is being claimed): For glazing sealants used inside of the weatherproofing system, including printed statement of VOC content

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Typically, ask for samples of only special types of glass.

6. Submit 6 inch square samples of [ ].

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7. Three inch long beads of glazing sealant for color selection.

8. Manufacturer's standard labor and material replacement warranty against sealed insulating glass units having seal failure and/or interpane dusting or misting.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with FGMA Glazing Manual and FGMA Sealant Manual.

B. Use an installer that has completed at least 20 projects of similar size and scope as this project.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Do not install glazing when ambient temperature is lower than the minimum recommended in the glazing compound manufacturer's installation instructions.

PART 2 PRODUCTS

2.1 FLAT GLASS MATERIALS

A. Manufacturers

1. Guardian Industries Corporation

2. Interpane Glass Company

3. Libbey-Owens-Ford Company

4. PPG Industries, Inc.

B. Float glass

1. Use float glass Type FG-A, ASTM C1036, Type 1 transparent flat Class 1 clear, Quality q3 glazing select, 1/4 inch thick.

C. Laminated safety glass

1. Use Type FG-B, clear, laminated with plastic interlayer to comply with ANSI Z-97.1, 1/4 inch thick.

D. Tempered safety glass

1. Use Type FG-B, clear, fully tempered to comply with ANSI Z-97.1, 1/4 inch thick.

E. Wired glass

1. Use Type FG-H, clear, polished both sides, square mesh of woven stainless steel wire of 1/2 inch grid size, 1/4 inch thick.

2.2 SEALED INSULATING GLASS UNITS

A. Manufacturers

1. Guardian Industries Corporation

2. Interpane Glass Company

3. Libbey-Owens-Ford Company

4. PPG Industries, Inc.

B. Sealed insulating glass units

1. Use Type SG-A, double pane with glass elastomer or glass to mastic edge seal; outer pane of 1/4 inch thick grey tint and inner pane of 1/4 inch thick “Low E” glass.

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There are several levels of performance of this material. Assistance from the User must be sought to satisfy protection needs, usually dependent on the type(s) of weapons that might be employed.

2.3 BULLET RESISTING LAMINATED GLAZING

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2.4 PLASTIC SHEET MATERIALS

A. Manufacturers

1. Cyro Industries

2. GE Plastics

B. Use polycarbonate sheet, Type PS-A, ANSI Z97 plastic compound, clear, silicone abrasion resistant coating, 1/4 inch thick.

2.5 GLAZING COMPOUNDS

A. MANUFACTURERS

1. Pecora Corporation, No. 896

2. Tremco Construction Products, Proglaze

B. Use silicone sealant, Type GC-F, ASTM C920, Type S, Grade NS, Class 25, single component, non-bleeding, non-staining, cured Shore A hardness of 15 to 25, color as selected from manufacturer's standard colors. VOC content not to exceed 250 g/L when calculated according to 40 CFR 59, Subpart D, if claiming LEED credit.

2.6 GLAZING ACCESSORIES

A. Manufacturers

1. Tremco Construction Products

B. Use setting blocks; ASTM C864 Option ll, silicone, Shore A hardness of 80, length of 0.1 inch for each square foot area of glazing.

C. Use spacer shims; ASTM C864 Option ll, silicone, Shore A hardness of 50, minimum 3 inch long by one half the height of the glazing stop by thickness to suit application.

PART 3 EXECUTION

3.1 INSPECTION

A. Verify that openings for glazing are correctly sized and within tolerance.

B. Verify that surfaces of glazing channels or recesses are clean and free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

3.2 PREPARATION

A. Clean contact surfaces with solvent and wipe dry.

B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

C. Prime surfaces scheduled to receive sealant.

D. Install sealant in accordance with manufacturer's installation instructions.

3.3 INSTALLATION - EXTERIOR WET METHOD

A. Place setting blocks at 1/4 points and install glazing pane or unit.

B. Insert removable stops with glazing centered in space by inserting spacer shims both sides at 24 inch intervals, 1/4 inch below sight line.

C. Fill gaps between glazing and stops with sealant to depth of bite on glazing, but not more than 3/8 inch below sight line to ensure full contact with glazing and continue the air and vapor seal.

D. Apply sealant to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

3.4 CLEANING

A. Remove glazing materials from finish surfaces.

B. Remove labels after Work is complete.

C. Clean glass and adjacent surfaces.

3.5 PROTECTION OF FINISHED WORK

A. After installation, mark panes with an "X", using removable plastic tape or paste. Do not mark coated glazing that may be damaged by the marking material.

END OF SECTION

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Do not delete the following reference information:
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FOR LANL USE ONLY

This project specification is based on LANL Master Specification 08 8000 Rev. 1, dated September 28, 2006.